Algebra 2 **Name**_____
WS: 2.7 **Date**_____ **Block**____

In 1 – 4, evaluate each function for the indicated values.

1.) $f(x)=\begin{cases} x, \text{ if } x<2 \\ 2x-1, \text{ if } x\geq 2 \end{cases}$

a.) $f(4)$

b.) $f(0)$

2.) $f(x)=\begin{cases} x+3, \text{ if } x\leq 1 \\ 2(x+1), \text{ if } 1<x\leq 3 \\ 11-x, \text{ if } x>3 \end{cases}$

a.) $f(0)$

b.) $f(4)$

c.) $f(2)$

3.) $f(x)=\begin{cases} 5-x, \text{ if } x\leq 4 \\ \frac{1}{4}x, \text{ if } 4<x\leq 8 \\ 10-x, \text{ if } x>8 \end{cases}$

a.) $f(10)$

b.) $f(5)$

c.) $f(2)$

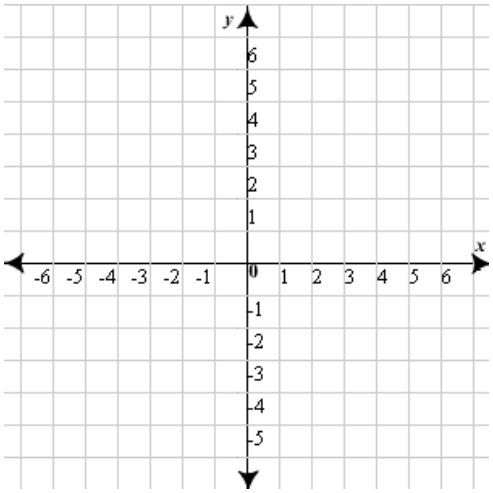
4.) $f(x)=\begin{cases} 3, \text{ if } x<2 \\ 2x-1, \text{ if } x\geq 2 \end{cases}$

a.) $f(4)$

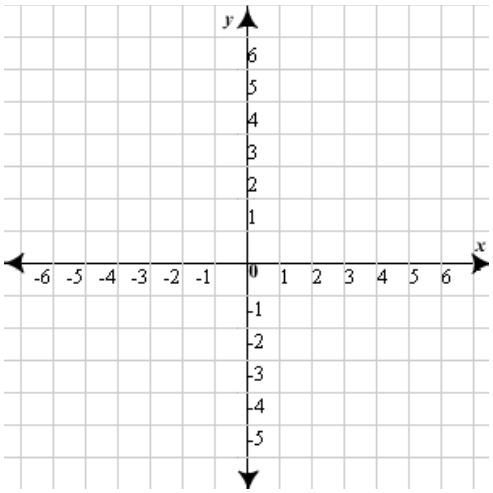
b.) $f(2)$

In 5 – 7, graph each function. State the domain and range.

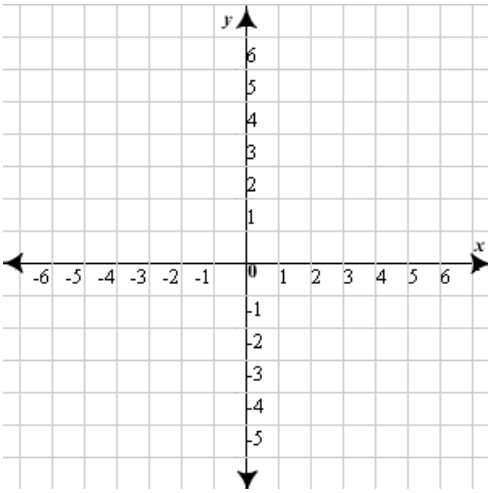
5.) $f(x)=\begin{cases} x, \text{ if } x>1 \\ -2x+3, \text{ if } x\leq 1 \end{cases}$



6.) $f(x)=\begin{cases} x-2, \text{ if } x \le 0 \\ x+2, \text{ if } x > 0 \end{cases}$

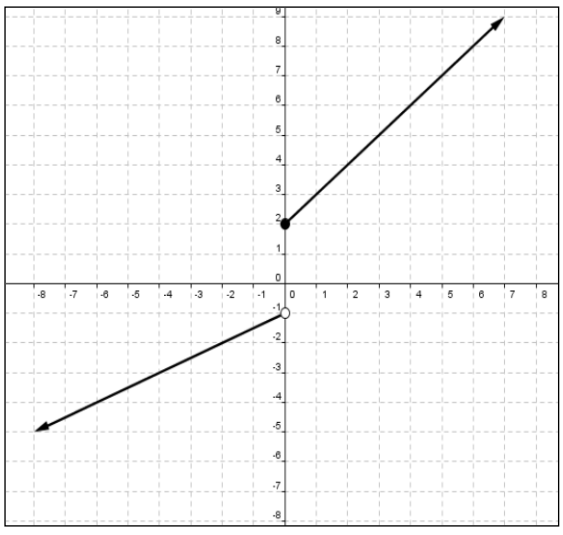


7.) $f(x)=\begin{cases} -\frac{1}{2}x+1, \text{ if } x < 2 \\ 2x-3, \text{ if } x \ge 2 \end{cases}$

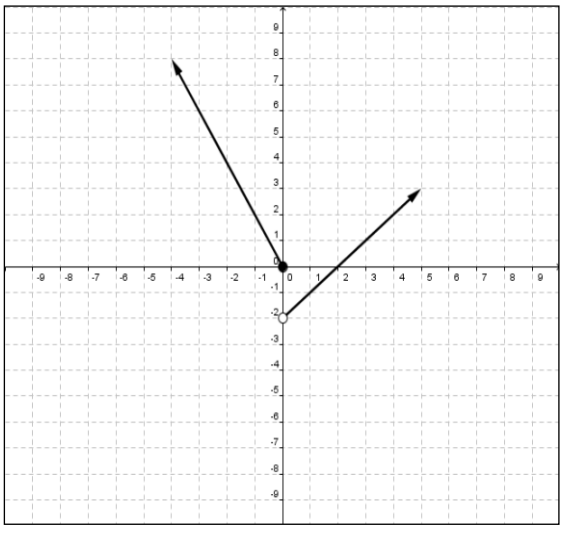


In 8 – 9, write a rule for each piecewise function.

8.)

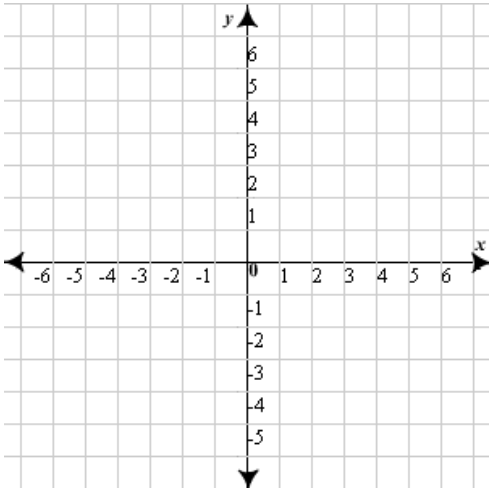


9.)



In 10 – 11, graph each step function. State the domain and range of each.

10.) $f(x) = \begin{cases} -1, \text{ if } -4 \le x < -2 \\ 1, \text{ if } -2 \le x < 0 \\ 3, \text{ if } 0 \le x < 2 \\ 5, \text{ if } 2 \le x < 4 \end{cases}$



11.) $f(x) = \begin{cases} 0, \text{ if } -2 < x \le 1 \\ -2, \text{ if } 1 < x \le 3 \\ -4, \text{ if } 3 < x \le 5 \end{cases}$